

MUSSEY (R.D.)

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BY

REUBEN D. MUSSEY, M.D., LL.D.



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# WHAT SHALL I DRINK?

BY

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## WHAT SHALL I DRINK?

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THIS question, so commonly put by the dyspeptic to his physician, often results in far-reaching consequences. A distinguished practitioner confined his patients to coffee, and a bit of meat, for breakfast; and to steak, with brandy and water, for dinner. Nothing more was to be eaten till the breakfast of the next morning. The dyspepsia was relieved by the long abstinence from food, but the dinner's drink made many drunkards.

Multitudes of physicians at the present time prescribe distilled or fermented liquors for dyspepsia, to be taken indefinitely, without the suggestion that, from prolonged

medicinal use, an appetite for liquor may be contracted, which no human skill can permanently control.

Dr. S. G. Howe, Superintendent of the South Boston Institution for the care of Idiots, reported to the Legislature of Massachusetts, "In a large proportion of cases, alcohol is either directly or indirectly concerned in the production of the idiocy with which the State is burdened."

In the Report of the Lunatic Hospital at Columbus, Ohio, for 1861, Dr. Hills, the physician, says of one of his patients, that his father, in the first part of married life, was strictly temperate, and had four children, all yet remaining healthy and sound. From reverses of fortune, he became discouraged and intemperate for some years, having in this period four children, two of whom we have now received into the asylum. A third one was idiotic, and the fourth epileptic. He then reformed in habits, had three more children, all now

grown to maturity, and to this period remaining sound and healthy." \*

The appetite of the confirmed intemperate is capable of showing a fearful intensity, absorbing the weightiest moral considerations. Dr. Macnish records the following reply of an intemperate man to his friend: "Your remarks are just, — they are indeed too true, — but I can no longer resist temptation. If a bottle of brandy stood at one hand, and the pit of hell yawned at the other, and I were convinced that I would be pushed in as soon as I took one glass, I could not refrain. You are very kind; I ought to be very grateful for so many kind, good friends; but you may spare yourselves the trouble of trying to reform me; the thing is out of the question." †

Men of rare talents and extensive attainments may acquire the habit of drinking to such an extent as to rely on alcoholic

\* Dr. J. Ray, "Mental Hygiene," pp. 45, 46.

† "Anatomy of Drunkenness," chap. 14.

excitement in their greatest mental efforts. "Pitt, during the latter years of his life, if not before, never encountered the labor and excitement of a parliamentary debate, without enormous libations of port wine. Two or three bottles of a night, accompanied by a beefsteak, was the usual allowance, and undoubtedly he would have been powerless without it. It would have required a stronger constitution than Pitt's to stand the wear and tear of such duties and such habits beyond the age of forty-five.

"A better example, both in morals and hygiene, was exhibited by his illustrious compeer, Burke, who met the same kind of demand upon his energies by no stronger stimulus than hot water. He lived into his sixty-eighth year." \*

Alcoholic drinks contain a stimulus which makes them convenient in temporary depression or prostration, as from a shock or

\* "Mental Hygiene," p. 86.

a wound. "Give strong drink to him who is ready to perish;" but the habitual use for a length of time is capable, in innumerable instances, of prostrating the most gigantic intellects. The appetite thus generated is but rarely cured. Most of those who have consented to enter an institution on the principle of entire abstinence from liquor, on finding their general health recruited, are perfectly confident of their power to resist temptation. "They say they feel perfectly well, have not the slightest desire for drink, and, therefore that further seclusion would be not only unnecessary, but prejudicial to their mental and bodily health." Says Dr. Ray, "The amazing confidence they express in their future security, is one of the curious traits of this condition. A great many have come under my observation, but I never knew one, not even of those who had repeatedly fallen, and had most deplored their infirmity, to express any apprehension

of falling again. On the contrary, from the moment when they begin to resume their proper consciousness until they leave the hospital, the burden of their story is, that they are safe for ever after, that not the slightest danger exists of their disregarding the terrible lessons of experience."

What an appetite ! Serpent-like, it can lie quiet and unobserved till waked into activity by a single sip of liquor, when, in a moment, it throws a coil around its victim, which becomes tighter and tighter, till his struggles are powerless.

If an alcoholic beverage, by the daily repetition, can in many instances cause the indomitable appetite for liquor, is it the best medicine we possess for dyspepsia ? We have tonic barks and roots ; we have soda, carbonate of ammonia ; we have iron, the muriate of which is, to a great extent, a preventive of erysipelas, gangrene, and phlebitis ; we have bismuth and arsenic ;

we have iodine, chlorine, bromine, and strychnine.

In intermittent fevers, some physicians combine quinine with some preparation of alcohol to increase its efficacy. Surgeon George Derby, in his report, 23d Massachusetts Volunteers, Department of North Carolina, June 1, 1863, remarks, "My confidence in this remedy (quinine) is very great. I am sure it has saved many lives in my regiment. I give it in simple water, without the addition of either whiskey or sulphuric acid. Although the solution is imperfect, I have never found it a serious objection."

In a report to Brigadier General W. A. Hammond, Surgeon-General U. S. Army, made by one of the medical inspectors of the United States army, under date of June 16, 1863, the following opinion and statements are made:—

"In prostration from heat or excessive labor, positive cases of *coup-de-soleil* (sun-

stroke) and general prostration affecting the mucus membranes of the air-passages as well as of the intestinal canal, I consider *carbonate of ammonia* as one of the most valuable of stimulants.

“In the campaign of one year ago in Tennessee, through Nashville, Shiloh, Corinth, and North Alabama, I am persuaded that the alcoholic drinks acted unfavorably upon the diarrhœa that affected most of the troops. Other medical officers have expressed the same opinion.

“The treatment by astringents, in some forms of the diarrhœa, was of little permanent value, till the alterant effect of mercurials was secured. . . . The soldiers needed antiscorbutics and aromatics, and when they could be secured, the corps realized a good degree of health.

“In the entire range of my medical observation, as a medical officer of the army, I have seen but one case of mercurial salivation. One medical officer in the field in-

formed me that he had had a half dozen very slight cases of ptyalism ; the most severe was from six grains of blue mass, given with other cathartic medicine.

“In the Western army, to my knowledge, there has prevailed a severe stomatitis (sore mouth), for which mercurials would have been held responsible, had any been given, attributed, however, to the tendency to scurvy.

“I have the honor to be,

Very respectfully,

Your obedient servant,

W. H. MUSSEY,

*Med. Inspector, U. S. A.”*

The concurrent testimony of our army surgeons is in support of the opinion that diarrhoea is the bane of our army, whether in camp or in motion. Dr. O. E. Gibbs, of Freswsburgh, N. Y., has a paper, copied by the “Boston Medical and Surgical Journal,” of August 20, 1863, from the Cincinnati “Lancet and Observer,” in which

he considers the “‘hard-tack,’ salt pork, and poor beef,” without a supply of vegetables, as its origin. He gave the persulphate of iron, in the dose of one to five grains, with a little opium, two or three times a day. It was continued twice a day for one, two, or three weeks, to prevent a return of the complaint. Some patients would bear a two or three grain pill of opium with benefit during convalescence. Dr. John Davis, of Cincinnati, in the “Lancet and Observer” for October, 1862, had reported several cases of successful treatment of diarrhoea, although Dr. Gibbs says that he had not seen Dr. Davis’s paper when he began the use of it. The experiments of Lallemand, Perrin, and Duroy, three distinguished French chemists, go to show that the alcohol of distilled and fermented liquors, when taken into the stomach, passes into the blood without being decomposed, and is ultimately cast out by the kidneys, the skin, and the lungs, *undecom-*

*posed alcohol still.* While in the blood, it interfered with the dislodgement of the waste and worn-out materials, by lessening the quantity of them, in the form of carbonic acid from the lungs, and urea by the kidneys, to give place to new materials received from the taking of fresh quantities of food.

Prout and Percy, as well as Lallemand and his fellow-chemists, found that alcoholic drinks retarded these processes. So did Prof. N. S. Davis, of Chicago, and also that the vital temperature was diminished. It is well known that persons in liquor who are exposed in cold weather are particularly liable to frost-bite. Sir John Ross, in his long Arctic voyage, from 1829 to 1833, which was remarkable in its exposures and hardships, and for the fact that of a crew of twenty-three persons only three died, attributes this exemption to unusual precautions, and especially to abstinence from intoxicating drinks. He says, "It is difficult to persuade men, even though they

should not be habitual drinkers of spirits, that the use of these liquors is debilitating, instead of the reverse. The immediate stimulus gives a temporary courage, and its effect is mistaken for an infusion of new strength ; but the slightest attention will show how exactly the reverse is the result. It is sufficient to give men under hard and steady labor a draught of the usual grog, or a dram, to perceive that often in a few minutes they become languid, and as they term it, faint, losing their strength in reality, while they attribute it to the continuance of their fatiguing exertions. He who will make corresponding experiments on two equal boats' crews, rowing in a heavy sea, will soon be convinced that the water-drinkers will far outdo the others.

“ It is not that I am declaring myself an advocate for temperance societies, whatever may be their advantage, nor that I am desirous of copying a practice lately introduced into some ships, under whatever motives ;

but were it in my power, in commanding a vessel, I would exclude the use of grog on the mere grounds of its debilitating effects, and independent of any ulterior injury it may do, reserving it for those cases alone in which its use may be deemed medicinal, or for any special reason useful."

Mr. Edward Dusseault, of Somerville, Mass., crossed the African desert in 1860. In a letter to his friend, G. L. F., of Boston, dated at Timbuctoo, June 10, 1860, he makes the following statement: "The next day (the seventh after leaving Algiers), our water had become so bad that I could scarcely endure the wetting of my lips with it, much less to drink it. The whole of our company, excepting about fifteen, then used wine and other liquors, and endeavored to prevail on me to do the same; but, much to their astonishment, I steadily refused, notwithstanding the formidable summing up of all its wonderful properties as a preventive against African diseases.

“The sequel show show little the workings of secret agencies are sometimes known, for the result was, that *all* who used wine died soon after reaching Timbuctoo. Out of the eighty-two who left Algiers, *there are only sixteen left!* So much for the beneficial effects of ‘*moderate drinking!*’ I am free to say that I consider it due, in a very great measure, to my being a teetotaler, that I have escaped the maladies to which I have been exposed since leaving home. We finally reached Timbuctoo, having consumed fifteen days in crossing the entire desert.”

W. A. Hammond, M. D., Surgeon General U. S. A., published in 1863, a volume of 604 pages, on Hygiene, “with special reference to the military service.”

He considers alcohol as food. As a preliminary remark, Dr. H. says that “the chief reason why the advocates of a total prohibition of the employment of alcoholic liquors have been unable to carry convic-

tion to those to whom they have addressed themselves, is, that their remarks have mainly consisted of invectives, and that whatever facts they have brought forward have been altogether based upon the immoderate use of the agents in question."

Prof. N. S. Davis, in the "Chicago Medical Examiner" for October 1863, has remarked upon the foregoing statement as follows: "For fifty years, this has been the uniform reply of the advocates of alcoholic liquors as beverages, to all arguments, whether founded on statistical facts, showing the relative power of physical endurance between those who use and those who do not use alcohol; the relative ratio of sickness and mortality, or on direct physiological experiments. To show by actual results of labor in every department of human toil, whether in the harvest-field, the workshop, the brick-yard, the army, or the navy; whether in summer or in winter; whether under the burning rays of a torrid sun, or

midst the icebergs of the arctic regions, that those who use alcoholic beverages, whether fermented or distilled, actually do a less average amount of labor, are capable of less physical endurance, and suffer a higher ratio of attacks of sickness than those who, under exactly the same circumstances, wholly abstain from such liquors, is to deal mainly in “invectives” is it? To prove, by direct experiment, that alcohol enters the blood unchanged, disturbs and perverts the sensibility and action of the nervous structures, depresses the elementary properties of all the tissues, thereby retarding organic changes, and disturbing the natural play of those affinities, by which nutrition, disintegration, and secretion are effected; and is finally evolved again from the economy as alcohol, from the lungs, kidneys, etc., is also dealing mainly in “invectives,” we suppose.

“To show by the physiological action of alcohol, and by innumerable cases, taken

from every rank of human society, that the habitual, *moderate* use of alcoholic drinks leads, in nine cases out of every ten, to the 'immoderate' use of the same is also dealing in 'invectives.' Well, be it so for the present. Immediately following the paragraph quoted above, our author proceeds as follows: 'No one can for a moment deny that alcoholic liquors, when used in excessive amount, are not only injurious to the individual, but are also in the highest degree pernicious to society.

. . . But are such facts to influence us against the *proper* use of all beverages which contain alcohol? . . . Do we reject mutton because some one has killed himself by eating too heartily of mutton-chops?'

"We certainly should not condemn the proper use of an article merely because its abuse produced injurious effects. But we can not help asking, whether the W. A. Hammond, M. D., author of the work be-

fore us, ever heard of a certain Order, No. 6, excluding calomel from the supply-table of the army, *because it had been used* ‘immoderately’ by some of the army-surgeons, issued by W. A. Hammond, M. D., Surgeon-General of United States Army ?

“Without wasting words, however, on minor matters, let us first see what are the actual effects of alcohol on the human system, as shown by the experiments and researches of Drs. Percy, Prout, Bocker, Lallemand, Hammond himself, and others, as collated in the chapter under consideration. They may be summed up as follows :

“1. The alcohol taken into the stomach is rapidly absorbed into the blood, circulated with it throughout the whole system, and is eliminated chiefly through the lungs and kidneys ; being readily detected, by the proper tests, both in the vapor of the breath and in the urine.

“2. While in the blood, it produces an exhilarating effect upon the brain and ner-

vous centers, causing thereby disturbance in the mental operations and sensibilities of the patient.

“3. Its presence in the blood diminishes the aggregate amount of eliminations from the several excretory organs of the body, doubtless by diminishing both structural disintegration and secretion.

“These propositions may be considered as well settled by a great variety of experiments and observations, both in Europe and America. But the practical inferences to be drawn from them are still the subjects of much controversy. Thus, a class of chemico-physiologists, embracing Liebig, Moleschott, Hammond,—the author of the work before us,—and many others, claim that, because the presence of the alcohol in the human system diminishes the aggregate amount of eliminations, and causes an increase in the weight of the body, provided the digestion of other food goes on as usual, it actually supplies the place of food.

“Thus, on page 539 of the work before us, Dr. Hammond says, ‘We have seen that it takes the place of food, and that the weight of the body increases under its use. Any substance which produces the effects which we have seen to attend on the use of alcohol, even though it is not demonstrable at present that it undergoes conversion into tissue, is food ;’ and on the next page we find a quotation from Moleschott, as follows: ‘Alcohol is a savings-bank for the tissues, — if the expression will be understood. He who eats little and drinks moderately of alcohol, retains as much in his blood and tissues as he who, in corresponding relations, eats more and drinks neither beer, nor wine, nor brandy.’ It is on this assumption, that alcohol is a substitute for food, that our author and others of the same physiological school base nearly all their reasoning in favor of the general use of alcoholic compounds as beverages. It is mainly on this same assumption, that a very

large class of medical writers and practitioners base their recommendation of alcoholic drinks in the treatment of numerous important diseases. Hence the question, whether this assumption or inference is correct; whether it legitimately follows from the premises or facts proved, is one of the highest importance in its relations to physiology, therapeutics, and social life. Plainly and concisely stated, the premises and the inference are as follows:—

“1. It is definitely proved, by a great variety of experiments, that under the influence of alcohol, other things being equal, the sum total of the excretions or eliminations from the lungs, skin, kidneys, bowels, etc., are diminished, and the body gains in weight. This is the premise from which it is inferred.

“2. That such diminution of elimination is caused by the alcohol retarding the natural disintegration of the tissues, while the processes of assimilation and construction

of tissues is allowed to continue; and that thereby the alcohol acts the part of actual food.

“Thus, the naked question is evolved: whether a retardation of the natural disintegration of tissue and elimination of the resulting effete matter are actually equivalent to, or will physiologically compensate for, a certain amount of assimilation and nutrition? Dr. Hammond, and the advocates of the use of alcoholic beverages, generally assume the affirmative; but is their position in consonance with the known and acknowledged laws which govern the nutrition and disintegration of living tissues? It is universally conceded, that living organized animal structures are composed of organic atoms or cells, none of which remain permanent, but each of which serves its purpose, and gives place to a new one. It is further generally conceded, that the performance of every functional act or display of force, whether mental or physi-

cal, is attended by more or less displacement of these atoms. It is this constant displacement of old organic atoms that renders a regular supply of food or ingesta necessary to the maintenance of life in all the higher orders of animals. This constant atomic change being a physiological law of the organization, taking place under the guidance of an inherent vital affinity, can not be retarded, except by directly impairing or weakening the affinity itself, or by introducing some new agent possessing a stronger affinity for some of the atoms composing the tissues than is possessed by oxygen, or whatever naturally effects the primary steps of disintegration. To do either of these manifestly induces a *pathological* condition incompatible with the continuance of health. For every intelligent physiologist knows, that on the constant display of vital affinity in the organic or atomic changes taking place in the tissues, depends the development of

caloric to maintain animal temperature; the generation of nerve sensibility; the elaboration of the secretions; and, indeed, all the distinctive phenomena of animal life. Hence, whatever agent introduced into the blood, in a healthy state of the system, is capable of retarding the process of disintegration, must, if persisted in, necessarily produce either disease, or perverted nutrition, or both. Dr. Hammond himself sees, at least partially, this conclusion, as is evident from the following, from page 540: ‘Alcohol retards the destruction of tissue. By this destruction force is generated, muscles contract, thoughts are developed, organs secrete and excrete. Food supplies the material for new tissue. *Now, as alcohol stops the full tide of this decay, it is very plain that it must furnish the force which is developed after it is intgested. How it does this is not clear.*’

“Here is a full acknowledgment of the fact, that to retard the metamorphosis or dis-

integration of the tissues is to retard, in the same ratio, all the force-producing processes or organic functions of animal life. True, he attempts to escape from the dilemma by supposing that the alcohol itself comes to supply the force which its presence prevents the natural atomic changes in the tissues from generating ; but how it does this, he frankly confesses, 'is not clear.'

"His attempt, on the next page, to explain the matter by saying, 'it is not at all improbable that alcohol itself furnishes the *force* directly, by entering into combination with the products of tissue decay, whereby they are again formed into tissue, without being excreted as urea, uric acid, etc.,' is not only destitute of proof, but unfortunately in direct conflict with the results of a well-devised series of experiments by Lallemand, Perrin, and Duroy, which show that all the alcohol taken is ultimately eliminated through the excretory organs, unchanged. The same is confirmed by Dr. Hammond's

own experiments, during which the alcohol was generally detected both in the breath and the urine some time after it was absorbed from the stomach.

“Thus, turn whichever way they will, those who advocate the doctrine, that a retardation of disintegration is equivalent to nutrition, involve themselves in difficulty. Indeed, the proposition itself is a physiological absurdity. If it were true, it would only be necessary to find some substance that would arrest the processes of tissue disintegration entirely, and we might live on without the necessity or *expense* of eating at all. Indeed, if alcohol is capable of retarding tissue destruction, and at the same time of furnishing the required *force* itself, what is to hinder a man from living on it indefinitely? Whether fascinated by the beautiful theory of Hammond or not, many a poor fellow has practically tested it, but has generally been unfortunate enough to have the experiment cut short by a fit of

*delirium tremens*. We have thus far pursued the subject as though the experiments cited by our author actually proved that alcohol retarded the disintegration of tissues; but they really prove no such thing. They simply show that, while alcohol is present in the system, the sum total of eliminations is diminished, and the weight of the body increased, provided the usual supply of ordinary food has been continued. Whether the diminished excretions are owing to retarded disintegration of tissues or to the direct action of alcohol on the excretory organs, whereby their power to perform their respective functions becomes impaired, is a question open for discussion; and one to which we may recur at some future time.

“The only remaining ground on which alcohol can be claimed as food, in any sense, is that originally put forth by Liebig, and quoted approvingly by our author, namely, that, like other hydro-carbonaceous sub-

stances, it furnishes material for respiration. This, however, is also directly disproved by all the experiments cited in the chapter before us; by a series of experiments performed by myself, and reported to the Annual Meeting of the American Medical Association, in 1851; and by a great variety of facts derived from observation. It is evident that alcohol can act as respiratory food only by entering into combination with the oxygen; the resulting products of which would be carbonic acid gas and water; and, as a consequence, we should have an abundance of carbonic acid exhaled from the lungs, and an increased temperature of the system. Whereas the experiments cited by our author all show a diminution of carbonic acid in the exhaled air and the presence of alcohol unchanged; while those reported by myself show a positive decrease of temperature while under the influence of that agent. There are several other items in this chapter we had

intended to notice, but time will not permit at present. We have written enough to show the utter fallacy of the main positions of the author; in his effort to convert what he acknowledges in the outset to be a 'violent poison,' into beneficial food and drink. That part of the chapter commending the use of tobacco, is founded on the same fallacies, and exhibits the same absurdities.

"Indeed, his direct definition of food necessarily destroys all distinction between aliments and poison,—between food and medicine. After stating that the presence of alcohol in the system diminishes the destruction of tissue, and causes the body to increase in weight, he says, 'Any substance which produces the effects which we have seen to attend on the use of alcohol, even though it is not demonstrable at present that it undergoes conversion into tissue, *is food*.' Now, it is well known that opium, and probably, all the other

narcotics, diminish the organic changes; and, if taken in moderate doses, allowing appetite and digestion to continue, the body increases in weight. The same results have been known to accompany the use of arsenic, and other acknowledged poisons. Would Dr. Hammond, therefore, call opium and arsenic food? To do so would only be equalled in absurdity by the following remark of Liebig, gravely quoted as authority by our author: — ‘The use of spirits is not the cause, but an *effect of poverty*. It is an exception to the rule when a *well-fed* man becomes a spirit-drinker.’ Such an assertion, in this country, where a loaf of bread costs but a trifle more than a glass of whiskey or a mug of beer, and where men are almost as frequently seen staggering in broadcloth as in rags, will scarcely produce any other effect than to excite a smile at the theoretical vagaries of men eminent in some departments of science.”

A friend, who for many years has been

untiring in the cause of temperance, writes :  
“The law is silent ; temperance societies are inefficient ; and the nation is now fast drifting toward the abysses of imtemperance, and we need more power, — pulpit-power, — the power of God to waken us to action in this terrible crisis. My dear sir, I beg you to take your pen, and tell clergymen what they *have done* and what they *can do*.” Are not clergymen bound, as by a solemn oath, to preach the gospel ? and is it no part of the gospel to preach upon “righteousness, temperance, and judgment to come” ? Let ministers store their minds with facts on the temperance reform for the last half century, and especially with indubitable facts on the prostration, by alcoholic drink, of the intellectual faculties, the moral sense, the shortening of life, and the blackness of darkness threatened in God’s Word. We have seen,” says that friend, “*thirteen* dram-shops demolished by a couple of sermons from a

young preacher. We fix no limits to the power of an honest pulpit."

On entering the study of medicine, Haller renounced wine for ever, that he might be certain to avoid the abuse of it.\* If our medical men would imitate this prince of physicians and founder of physiology, as he has been fairly styled, how rapid would be the progress of our profession. What must be the influence upon thousands of men in our armies if the spirit ration is allowed, or if liquor can be sold to them with that one word, "food," associated? Do mustard and Cayenne pepper act as food in stimulating the stomach to a sense of increased heat? Does the whipping of a horse stuck in a mud-pit, causing extra exertion to get out, act as food, in giving strength and activity to his muscles? Who can estimate the amount of moral responsibility incurred by those physicians who prescribe alcoholic liquor to be taken indef-

\* "*Physic and Physicians*," Vol. I, p. 298.

initely for chronic stomach disorders, or those medical men in high places, who allow their names to figure for months upon the title-page of a monthly medical journal, in praise of Bourbon whiskey, as if it were one of the greatest blessings ever conferred upon the human family?





